**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

This listing of claims replaces all prior versions, and listings, of claims in the application.

## **Listing of Claims:**

1. (currently amended) A method for controlling at least one computing element with a universal console (UC), comprising:

storing <u>at least one user preference</u> a <u>user's preferences</u> for the <u>UC universal console</u>; selecting a computing element to control with the UC;

receiving by the UC a canonical user interface (UI) representation of the computing element's UI wherein the canonical UI representation is pre-defined for the computing element;

instantiating a concrete UI by the UC taking into account the stored <u>at least one user</u> preference <u>user preferences</u>;

selecting at least one action-command to be carried out by the computing element; and transmitting to the computing element data associated with said at least one action-command using a remote procedure call mechanism.

- 2. (original) A method according to claim 1, wherein said selecting at least one action-command includes requesting information about the state of said at least one computing element.
- 3. (original) A method according to claim 1, further comprising interacting with at least one group hierarchy to obtain data in connection with said selected at least one action-command to be carried out by the computing element.
- 4. (original) A method according to claim 1, wherein said storing includes storing data indicating at least one disability of the user.
- 5. (original) A method according to claim 1, further including carrying out said action-command by said computing element.
- 6. (original) A method according to claim 1, further including receiving by the UC notifications from the computing element.

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

7. (original) A method according to claim 6, wherein said notifications include at least one of an error message, warning message, status update message and state change.

- 8. (original) A method according to claim 1, wherein said canonical UI representation is formatted according to an XML stream.
- 9. (original) A method according to claim 1, further including requesting a list of available devices that may be controlled by UC.
- 10. (original) A method according to claim 1, wherein communications between said UC and said computing element are made via Hypertext Transfer Protocol (HTTP).
- 11. (original) A method according to claim 1, wherein said computing element is one from the group of a computing device and an application.
- 12. (previously presented) A method according to claim 1, wherein said remote procedure call mechanism makes calls according to Simple Object Activation Protocol (SOAP).
- 13. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for choosing one element a from a set A.
- 14. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting a subset A' from a set A.
- 15. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting one from the group of True/False, Off/On, OK/Cancel and Yes/No.
- 16. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting an integer n in the range  $n_1$  through  $n_2$ , with increment  $\delta$ .

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

17. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter for selecting a real number x in the range x1 through x2, with increment  $\delta$ .

- 18. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for an arbitrary string s.
- 19. (original) A method according to claim 18, wherein said arbitrary string s is to be selected from a suggestion set of strings S.
- 20. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for the modification of a given first string s, resulting in a second string s'.
- 21. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for ordering the elements of set A into A'.
- 22. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a parameter type for pairing set A elements with set B elements.
- 23. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a group construct that contains at least one of commands and subgroups.
- 24. (original) A method according to claim 1, wherein said canonical UI representation includes a representation associated with a command construct that specifies at least one action to send to the controlled element that will carry out the action-command.
- 25. (original) A method according to claim 24, wherein said canonical UI representation includes a description of the parameters associated with the at least one action.

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

26. (original) A computer readable medium bearing computer executable instructions for carrying out the method of claim 1.

27. (original) A modulated data signal carrying computer executable instructions for use in implementing the method of claim 1.

28-41. (canceled)

42. (currently amended) A computer system wherein a user controls at least one computing element, said system comprising:

at least one computing element each having a <u>pre-defined</u> canonical user interface (UI) description associated therewith;

a universal console (UC) for controlling said at least one computing element and storing user preferences therein;

wherein a computing element of said at least one computing element communicates its associated canonical UI to said UC;

wherein said UC generates a concrete UI description from said canonical UI and said stored user preferences; and

wherein a user thereafter utilizes said UC to control said computing element via said concrete UI by selecting at least one action-command.

- 43. (original) A computer system according to claim 42, wherein said selecting at least one action-command includes requesting information about the state of said at least one computing element.
- 44. (original) A computer system according to claim 42, wherein a user of said UC interacts with at least one group hierarchy to obtain data in connection with said selected at least one action-command to be carried out by the computing element.
- 45. (original) A computer system according to claim 42, wherein said storage of user preferences includes the storage of data indicating at least one disability of the user.

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

46. (original) A computer system according to claim 42, wherein said at least one computing element carries out said at least one action-command.

- 47. (original) A computer system according to claim 42, wherein said UC receives notifications from the at least one computing element.
- 48. (original) A computer system according to claim 47, wherein said notifications include at least one of an error message, warning message, status update message and state change.
- 49. (original) A computer system according to claim 42, wherein said canonical UI description is formatted according to an XML stream.
- 50. (original) A computer system according to claim 42, wherein said selecting at least one action-command includes requesting a list of available devices that may be controlled by UC.
- 51. (original) A computer system according to claim 42, wherein communications between said UC and said computing element are made via Hypertext Transfer Protocol (HTTP).
- 52. (original) A computer system according to claim 42, wherein said computing element is one from the group of a computing device and an application.
- 53. (previously presented) A computer system according to claim 42, wherein said remote procedure call mechanism makes calls according to Simple Object Activation Protocol (SOAP).
- 54. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for choosing one element a from a set A.
- 55. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting a subset A' from a set A.

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

56. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting one from the group of True/False, Off/On, OK/Cancel and Yes/No.

- 57. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting an integer n in the range  $n_1$  through  $n_2$ , with increment  $\delta$ .
- 58. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter for selecting a real number x in the range x1 through x2, with increment  $\delta$ .
- 59. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for an arbitrary string s.
- 60. (original) A computer system according to claim 59, wherein said arbitrary string s is to be selected from a suggestion set of strings S.
- 61. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for the modification of a given first string s, resulting in a second string s'.
- 62. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for ordering the elements of set A into A'.
- 63. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a parameter type for pairing set A elements with set B elements.

**DOCKET NO.:** MSFT-0302/167451.01

**Application No.:** 09/775,033

Office Action Dated: October 6, 2004

64. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a group construct that contains at least one of commands and subgroups.

- 65. (original) A computer system according to claim 42, wherein said canonical UI description includes a description associated with a command construct that specifies at least one action to send to the controlled element that will carry out the action-command.
- 66. (original) A computer system according to claim 65, wherein said canonical UI description includes a description of the parameters associated with the at least one action.
- 67. (new) A computer readable medium comprising computer executable instructions for controlling at least one computing element with a universal console (UC), comprising:

means for storing at least one user preference for the UC;

means for selecting a computing element to control with the UC;

means for receiving by the UC a canonical user interface (UI) representation of the computing element's UI wherein the canonical UI representation is pre-defined for the computing element;

means for instantiating a concrete UI by the UC taking into account the stored at least one user preference;

means for selecting at least one action-command to be carried out by the computing element; and

means for transmitting to the computing element data associated with said at least one action-command.